

## Executive Summary

### Number and Percent of Students Tested

During the period of September 14-October 16, 1998, the *Stanford Achievement Test Series*, Ninth Edition, Form TA, Abbreviated (*Stanford 9*) was administered to students throughout Virginia in grades 4, 6, and 9. This was the second administration of *Stanford 9* as the norm-referenced component of the Virginia State Assessment Program (VSAP)—the first administration occurred in Spring 1997 when *Stanford 9* was taken by students in grades 3, 5, 8, and 11.

The table below indicates the number and percent of students tested statewide at each of the three grade levels in Fall 1998 and corresponding data from the previous administration in Spring 1997.

Table 1.1— Number and Percent of Students Tested, 1997 and 1998:

Spring 1997, grade 3	81,087 / 95%
Fall 1998, grade 4	85,434 / 96%
Spring 1997, grade 5	81,171 / 96%
Fall 1998, grade 6	82,588 / 96%
Spring 1997, grade 8	78,382 / 95%
Fall 1998, grade 9	85,527 / 93%

### Statewide Percentile Ranks

While the same levels of *Stanford 9* were administered in Fall 1998 to grades 4, 6, and 9 as had been administered to grades 3, 5, and 8 respectively in Spring 1997, it is important to remember that Virginia's 1998 percentile ranks are based on comparison to a Fall, grade 4 national standardization while the 1997 percentile ranks were based on a Spring, grade 3 national standardization. The end result is that a given raw score will not necessarily yield the same percentile rank in both Fall and Spring scoring. This does not affect the usefulness of percentile ranks in drawing comparisons between Virginia's Fall 1998 achievement and the national average, but comparison of 1997 and 1998 percentile ranks (i.e., to determine growth, gain, or loss)—whether at the student, school, division, or state level—would not be statistically valid and must be made with appropriate caution.

### Virginia's Performance Predominantly Above the National Average

Regardless of the time of year at which a nationally-normed test such as *Stanford 9* is administered, national average performance always falls at the 50th percentile. Given that, Table 1.2 on page 6 confirms that across the three grades tested Virginia's Fall 1998 achievement was at or above the national average in 27 (82%) of the 33 *Stanford 9* subtests and content area totals. The following specific points are also indicated in Table 1.2:

- In grade 4, achievement was at or above the national average in 10 of the 11 subtests and content area totals.
- Achievement in grade 6 was also at or above the national average in 10 of the 11 subtests and content area totals.

- Achievement of Virginia's ninth-grade students was at or above the national average in 7 of the 11 subtests and content area totals.

**Table 1.2 – Fall 1998 Statewide Percentile Ranks**

<i>Stanford 9</i> level	Primary 3	Intermediate 2	Advanced 2
	grade 4	grade 6	grade 9
Reading Vocabulary	47	58	56
Reading Comprehension	50	58	60
<b>TOTAL READING</b>	<b>50</b>	<b>58</b>	<b>58</b>
Mathematics: Problem Solving	57	64	58
Mathematics: Procedures	51	52	46
<b>TOTAL MATHEMATICS</b>	<b>53</b>	<b>58</b>	<b>54</b>
Prewriting	52	42	47
Composing	50	54	52
Editing	57	57	48
<b>LANGUAGE</b>	<b>54</b>	<b>51</b>	<b>48</b>
<b>PARTIAL (Basic) BATTERY</b>	<b>53</b>	<b>58</b>	<b>55</b>

The Fall 1998 percentile ranks shown above can be used to reliably determine how Virginia students have performed in comparison to a national norm group, but they cannot be used—if compared—to reliably determine whether Virginia students gained or lost in terms of real performance in these subtests and content areas from 1997 to 1998. More reliable indicators of growth/loss are scaled scores.

### **Scaled Scores: A Better Measure of Change**

In contrast to the difficulty in comparing Fall and Spring percentile ranks to determine growth or loss, scaled scores can be used to make such comparisons because the *Stanford 9* Fall and Spring raw score to scaled score conversions in each given area are identical at each level of the test. For example, in Primary 3 (grades 3 and 4) Reading Vocabulary, a raw score of “X” will convert to a scaled score of “Y” for both Fall and Spring testing.

Additionally, each *Stanford 9* subtests and content area total features a constant scaled score range, regardless of the grade tested, test level, or test form. This allows comparison of a given student's, school's, division's, or state's achievement in a given subtest or content area total from year to year as well as over several years.

Table 1.3 on page 7 compares mean (“average”) statewide scaled scores from the Spring 1997 and Fall 1998 VSAP administrations and confirms the following important points:

- Grade 4 showed significant gains in performance in all 10 subtests and content area totals for which *Stanford 9* scaled scores have been developed.
- In grade 6, modest gains are shown in 7 of the 10 subtests and content areas.
- In grade 9, modest performance gains are shown in 5 of the 10 subtests and content area totals while a significant gain is shown in the Mathematics: Problem Solving subtest.

Table 1.3 – Comparison of Mean Statewide Scaled Scores, 1997 to 1998

<i>Stanford 9</i> level	Primary 3			Intermediate 2			Advanced 2		
	grade 3 Spring '97	grade 4 Fall '98	gain (loss)	grade 5 Spring '97	grade 6 Fall '98	gain (loss)	grade 8 Spring '97	grade 9 Fall '98	gain (loss)
Reading Vocabulary	581.3	625.8	44.5	671.6	673.3	1.7	707.7	708.5	0.8
Reading Comprehension	589.0	631.8	42.8	664.2	665.8	1.6	701.6	700.7	(0.9)
<b>TOTAL READING</b>	<b>586.8</b>	<b>629.3</b>	42.5	<b>666.8</b>	<b>668.5</b>	1.7	<b>702.6</b>	<b>702.3</b>	(0.3)
Mathematics: Problem Solving	579.2	624.2	45.0	658.9	662.4	3.5	679.8	686.4	6.6
Mathematics: Procedures	558.6	591.3	32.7	659.8	658.6	(1.2)	696.9	696.2	(0.7)
<b>TOTAL MATHEMATICS</b>	<b>569.5</b>	<b>608.9</b>	39.4	<b>658.1</b>	<b>659.7</b>	1.6	<b>686.5</b>	<b>690.2</b>	3.7
Prewriting	555.9	600.7	44.8	622.8	621.4	(1.4)	654.6	654.7	0.1
Composing	572.2	604.9	32.7	632.7	634.8	2.1	658.1	656.8	(1.3)
Editing	570.6	597.8	27.2	633.1	632.9	(0.2)	654.0	655.7	1.7
<b>LANGUAGE</b>	<b>562.6</b>	<b>600.0</b>	37.4	<b>629.5</b>	<b>629.7</b>	0.2	<b>654.5</b>	<b>655.2</b>	0.7

NOTE: Scaled scores are not available for the *Stanford 9* Partial Battery.

Figures 1.4 through 1.6 on pages 8-10 indicate the entire range of scaled scores for each subtest and content area total for each of the levels of *Stanford 9* Form TA Abbreviated administered in VSAP. Within each range, the locations of mean statewide scaled scores from the Spring 1997 and Fall 1998 VSAP administrations are indicated.

It is important to note (as indicated in Figures 1.4-1.6) that *Stanford 9* scaled score ranges are not the same from one subtest and/or content area to another. So, though scaled scores can be used within a given subtest or content area total to reliably compare performance from different testing cycles (i.e., Fall to Spring, year to year), they cannot be used to determine relative strength and weakness across subtests and content area totals. For example, comparison of a mean scaled score of 675 in Total Reading and a mean scaled score of 650 in Total Mathematics for sixth-graders in a particular school does not necessarily indicate that the school's sixth-grade students performed better in reading than in math.

Figure 1.4–VSAP Scaled Score Performance: *Stanford 9* Primary 3, Form TA Abbreviated

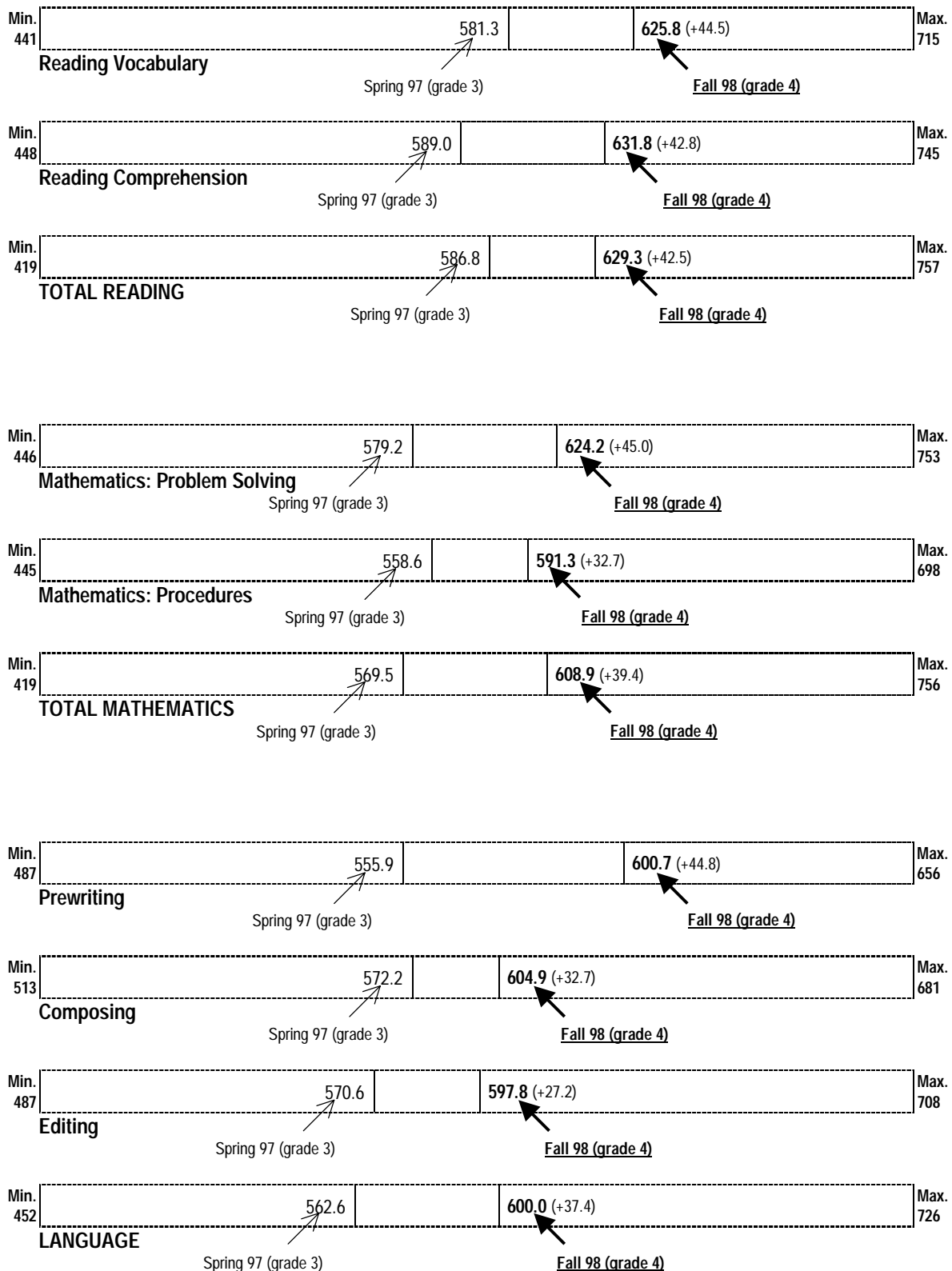


Figure 1.5–VSAP Scaled Score Performance: *Stanford 9* Intermediate 2, Form TA Abbreviated

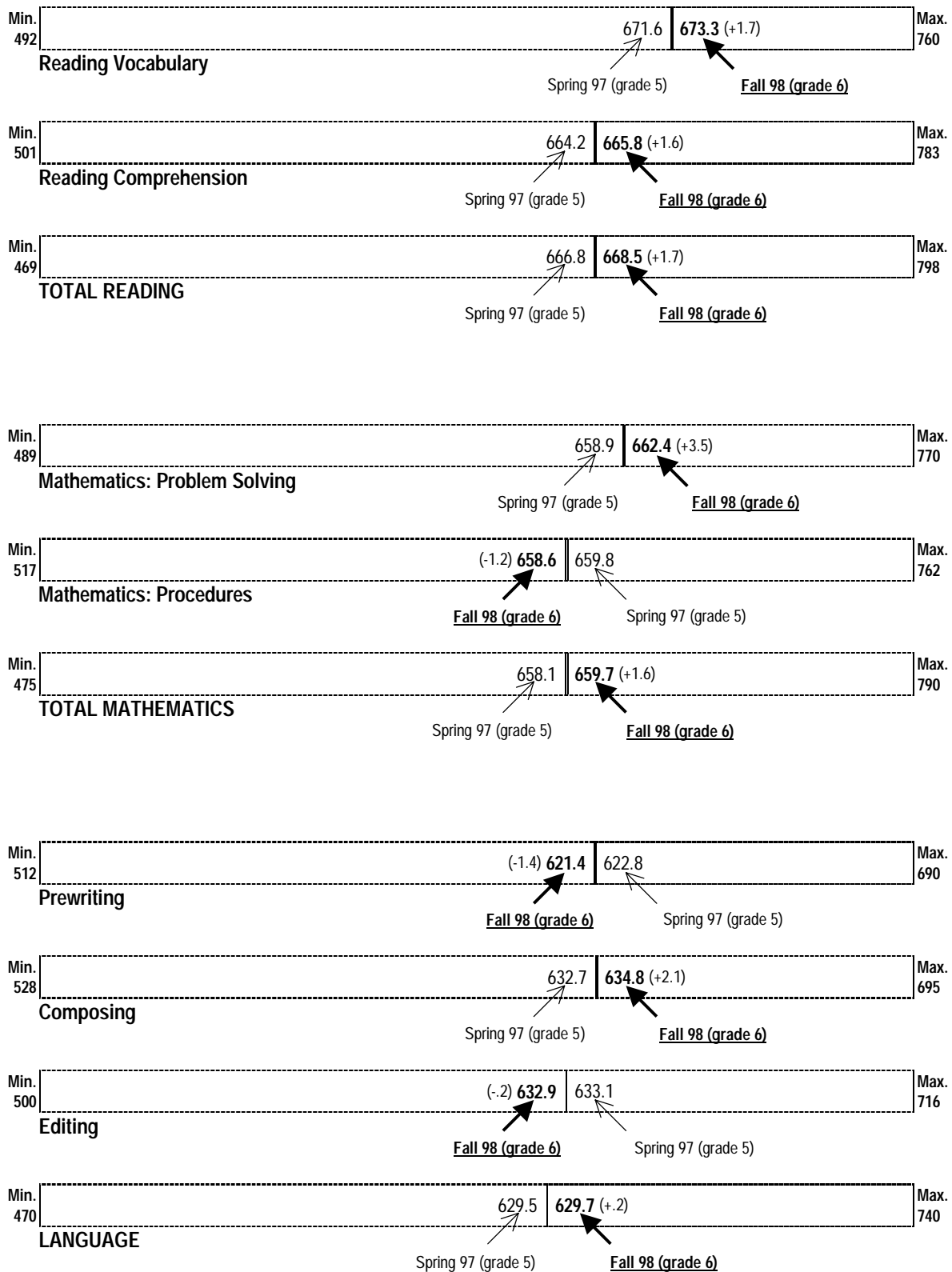
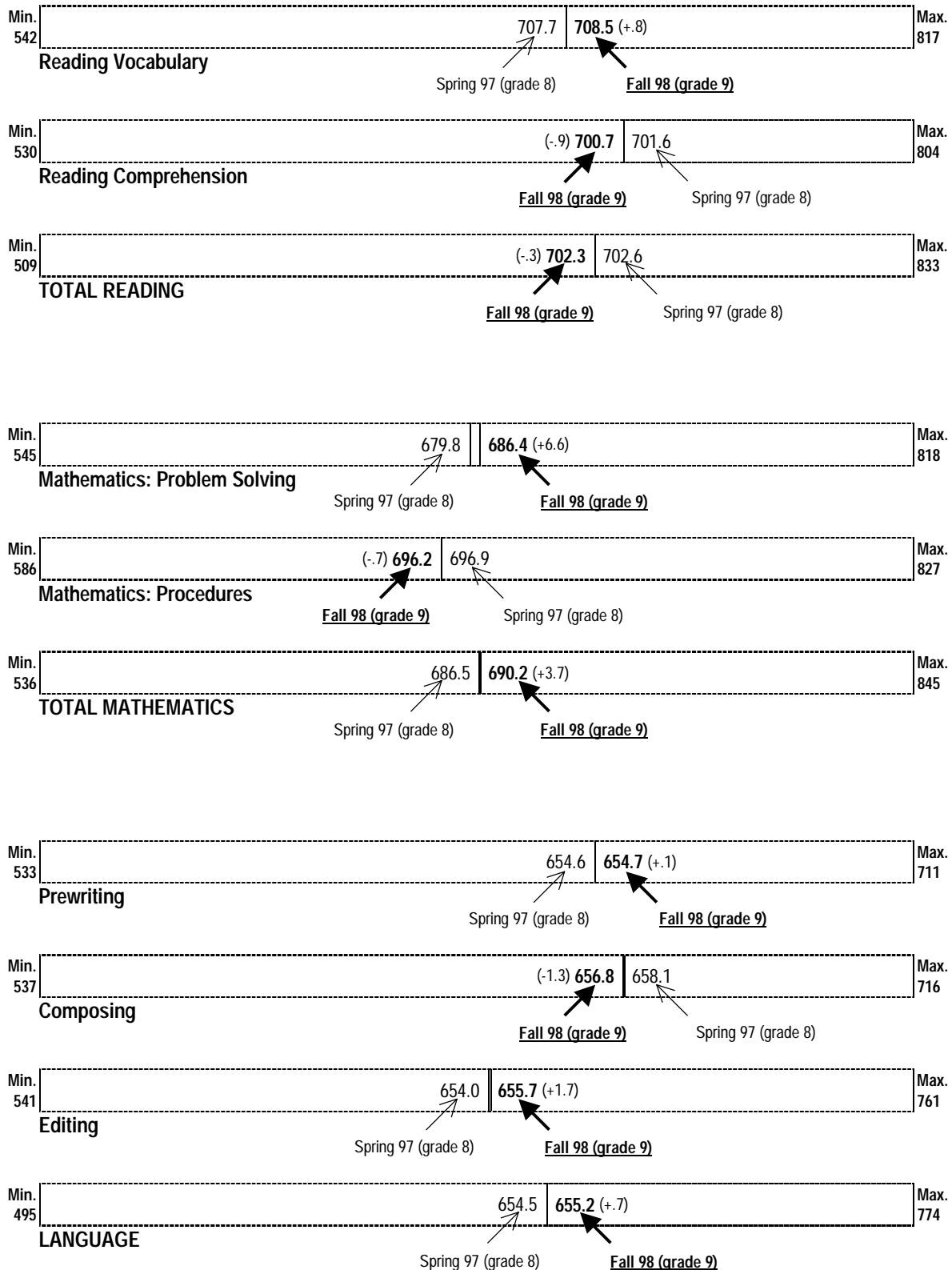


Figure 1.6–VSAP Scaled Score Performance: *Stanford 9* Advanced 2, Form TA Abbreviated



## **Achievement Summary**

In Fall 1998:

- Females generally scored higher than males in all subtests and content area totals except the Mathematics: Problem Solving subtest.
- American Indian/Alaskan Native students scored at or above the national average in roughly half of the subtests and content area totals (except for fourth-graders, who scored above average achievement in all subtests and content areas).
- Asian/Pacific Islander students scored at or above the national average in all areas except grade 4 Reading Vocabulary.
- Black students scored below the national average in all subtests and content area totals.
- Hispanic students in grades 4 and 9 scored below the national average in almost all subtests and content area totals, while Hispanic students in grade 6 scored at or above the national average in 5 of the 11 subtests and content area totals.
- White students scored at or above the national average in all subtests and content area totals except grade 6 Prewriting.
- Students with limited proficiency in English scored well below the national average in all subtests and content area totals.

In comparison to the national standardization, overall achievement of Virginia's students on Stanford 9 was again commendable in Fall 1998. In grades 4 and 6, achievement was at or above the national average (50th percentile) in 10 of the 11 subtests and content area totals and the Partial/Basic Battery. In grade 9, achievement was at or above the 50th percentile in seven of the eleven categories.